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SWAZILAND



ANNUAL MEDICAL
AND
SANITARY REPORT

FOR THE YEAR, 1966.

S W A Z I L A N D

ANNUAL MEDICAL AND SANITARY REPORT

1966

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INTRODUCTION

Swaziland has an area of 6,704 square miles and is bordered on the north, west and south by the Transvaal, and on the east by Mocambique and Zululand.

The Territory is geographically divided into four well defined regions, running from north to south, namely the mountainous highveld in the west with an altitude of 3,500 and 5,000 feet, the middleveld with an average altitude of 2,000 feet; and the lowveld or bushveld with an altitude of 1,000 to 300 feet; and the Lubombo Plateau on the east, with an altitude of 2,000 feet. Scenically the Territory is one of the more attractive parts of Africa. The highveld has a temperate climate and frosts occur during winter. The climate of the middleveld is subtropical and that of the bushveld almost tropical, although every few years a frost does occur.

Rainfall, which occurs chiefly in the summer, varies between approximately 30" a year in the lowveld. Drizzle and mists are frequent in the highveld areas. The country is well watered by numerous perennial streams and rivers, some of which are of a considerable size and now provide water for three large irrigation schemes, which have been established at Mhlume in the north-east, at Big Bend in the east (at both of which sugar is grown) and at Malkerns in the centre of Swaziland (which produces rice, sub-tropical fruit and citrus).

In addition to the irrigation schemes, other important agricultural activities are cattle ranching and seed cotton production in the bushveld and sub-tropical fruit, maize and rice production in the middleveld, in the southern portion of which a considerable amount of tobacco is also grown. In the mining field, Havelock Mine in the north-west is a most important producer of asbestos, and with the opening of the railway in November 1964, connecting Swaziland with Lourenco Marques, the mining of iron ore at Ngwenya and of coal at Mpaka got underway. A pulp mill and a sawmill are operating at two of the forestry concerns in the highveld.

A census of the total population was held in May 1966. This was the first census of all the people in Swaziland.

The figures are as follows:

African	362,367
Europeans	7,987
Other Non Africans	<u>4,217</u>
Total	<u>374,697</u>

One half of the area of the territory is in communal ownership of the Swazi Nation and the remainder owned by individual tenure farmers. The Swazi have the exclusive use of the communal tenure areas and the remainder is open to farmers of all races without discrimination. Swazi dwellings for the most part consist of wattle-and-daub structures, or bee-hive huts, and small family collections of these huts are widely dispersed. Other than in the neighbourhood of the larger towns, there are no villages. Whilst the agricultural activities of the Swazi are still, in the main, concentrated on the raising of cattle and goats and the cultivation of maize, the work of the Agricultural Department is now producing results, and both the standard and scope of Swazi farming are improving year by year.

The following hospitals exist:

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A. Run by Government

Mbabane	170 beds
Hlatikulu	142 beds
Piggs Peak	50 beds
Mankaiana	33 beds
Mahamba (Tuberculosis)	30 beds
Goedgegun	12 beds
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	896 beds

B. Run by Missions

Raleigh Fitkin Memorial,	275 beds
Manzini	
Good Shepherd, Stegi	67 beds

C. Run by Industry

Havelock Mine Hospital	65 beds
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D. Run Privately

St. Michael's Clinic	12 beds
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Total: 896 beds

Apart from these formal hospitals there are two bedded dispensaries or clinics run by industrial concerns which can accommodate up to about 20 patients each.

The rural areas are catered for by 44 clinics staffed by trained nurses, 27 of them being conducted by Missions and 17 by Government. The Southern area of Swaziland is fortunate in having had a doctor appointed by the Save the Children Fund who runs a mobile clinic and conducts regular clinics at eight different places.

There were 50 doctors, of whom 12 were licensed medical practitioners, 2 dental surgeons in the territory in 1966. 2 of the doctors were not in practice. Of the 48 practicing doctors, 17 were concerned with Government medicine, 9 with Mission work, 9 with Industrial Medicine, 12 in private practice, and 1 doctor was concerned with Save the Children Fund.

The Mbuluzi Leper Hospital, situated 10 miles from Mbabane and run by the Nazarene Mission, with the assistance of a Government grant, copes most adequately with the small number of lepers in the Territory. There is no mental hospital, and dangerous and violent lunatics are detained and treated in sections of the gaols.

The British Red Cross Society is now running Infant Welfare Clinics at Mbabane, Hlatikulu, Stegi, Piggs Peak, Manzini, Kwaluseni, Mhlambanyati and Goedgegun, at which most useful work is being done. The Save the Children Fund has started a school feeding scheme.

The Public Health Services of the territory are centred at the Health Office in Manzini for the control of Malaria and Bilharzia and at Mbabane which controls environmental health, Health Education and a Public Health Nursing Unit. There is a Pathology Laboratory at which routine serological, biochemical, bacteriological and haematological investigations are carried out.

The Medical Association of Swaziland whose members include private practitioners, medical missionaries and Government medical officers, hold quarterly meetings, which are well supported and which make up to some extent for the lack of professional contact so common in territories such as Swaziland.

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The training of nurses in Swaziland is carried out at the Ainsworth Dickson Training College attached to the Raleigh Fitkin Memorial Hospital, where training for the High Commission Territories Nursing Council qualifications in General Nursing, lasting 4 years, and in Midwifery, lasting 1 year, is given. The Ainsworth Dickson Training College can at present train sufficient nurses for the needs of Swaziland. Dispensers and Laboratory Assistants are trained at Government Hospitals as required.

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CHAPTER I

REVIEW OF THE YEARS WORK

The Hon. A. Z. Khumalo held the post of Member for Health on the Swaziland Executive Council throughout the year 1966. During this period he took a most keen and active part in the affairs of the Department, visiting every Government, Mission, industrial and Swazi National Council hospital and clinic throughout the Territory.

2. Staff

Dr. J. Alexander was promoted to Senior Medical Officer on 1st April, 1966 and Dr. J. Klopper was promoted to the post of Deputy Director of Medical Services on his return from overseas study on 26th November. The recruiting of Medical Officers improved markedly during the year and it was possible to fill the post of T.B. Medical Officer. At the end of the year only three Medical Officer posts remained vacant and one of these was filled by a Locum Tenens, thus leaving a deficit of only two Medical Officers.

The supply of trained nurses continued to exceed the demand and by the end of the year only two expatriate nursing sisters remained in the nursing service.

3. Hospitals and Clinics

The new operating suite at Hlatikulu Hospital was completed, a Government clinic was opened at Gège and a new Nazarene clinic opened at Esigcweni and a new Roman Catholic clinic completed at the Florence Mission Station. With the completion of the Prisons Building Programme, prisoners were transferred from the old Mbabane Prison to the new Prison. This made it possible towards the end of the year to transfer all mental cases which had until then been housed in district prisons to the old Mbabane Prison, and thus form the beginning of a Mental Institution. As it was evident that at some stage the United Kingdom military forces would be withdrawn from Swaziland and the Matsaha Barracks left vacant, a plan was drawn up for the utilisation of these barracks by the Medical Department. With the evacuation of the troops which occurred in November, rather sooner than expected, this plan was put forward to the Executive Council for consideration. After deliberating on the plans put forward by various departments, the Executive Council eventually allocated the barracks for the use of the Medical Department. The Plan proposed by the Medical Department included the following main usages:-

1. Conversion of the gate house to a clinic to meet the needs of the local population.
2. Conversion of the Quarter Master Store to a Central Medical Store including using the motor transport workshop as a manufacturing unit for stock mixtures, ointments etc.
3. The conversion of the main kitchen and dining Hall and four adjacent barrack blocks to a 200 bedded adult T.B. Hospital using the sick bay for cases requiring more intensive nursing.
4. Conversion of the NAAFI and four adjacent barrack blocks to a 200 bedded mental hospital.
5. Conversion of the Sergeants and NCO's mess to a 90 bedded childrens TB Hospital.
6. Conversion of the Officers Mess to female staff accommodation.

Obviously the full utilisation of the Matsapha Barracks will have to be phased as staff and funds become available.

In Government Hospitals the total admissions of full-paying patients fell slightly, but the admissions of part-paying patients increased by just over 2,000, i.e. about 20%.

The average daily number of patients in hospital rose to 719, which was a 15% increase over 1965. There was a slight fall in the number of operations performed and in the out-patients attendance. There was a very large increase in the number of patients attending maternity and childwelfare clinics and this was accompanied by a 24% rise in the number of confinements conducted in Government Hospitals.

The total expenditure by the Department rose to over R676,000, which was an increase of some 19.5% over 1965. The Department received about 11.6% of the total revenue of the territory.

4. Significant Diseases

Tuberculosis - the work of the T.B. Control Unit progressed well. Again there was a significant rise in the number of cases voluntarily seeking treatment.

Malaria - There was some small increase in the number of cases of malaria, but due to the abnormal rains following Cyclone Claud, a large increase can be expected in 1967.

Malnutrition - the number of cases of malnutrition and kwashiorkor treated in hospitals showed a marked increase.

Smallpox - There were 73 cases of Smallpox with three deaths reported during the year. A total of 51,000 vaccinations against smallpox were carried out.

Enteric Fever - The number of cases of Enteric Fever dropped from 300 in 1965 to 154 with 10 deaths.

5. Post Graduate Courses - 1966

Esther Simelane	Theatre	Israel
Abigail Mavuso	Public Health	India
Maggie Dlamini	Public Health	India
Priscilla Dlamini	Hospital	
	Administration	United Kingdom

OFFICIAL VISITORS 1966

1. Dr. H. J. L. Burgess - Inter-Country Nutrition Consultant, W.H.O.
2. Dr. W. J. M. Evans, C.B.E. - Deputy Medical Adviser, Ministry of Overseas Development.
3. Dr. Schaffer - Lecturer in Public Administration, University of Sussex.
4. C. M. Curruthers, Esq. - Field Director of OXFAM.
5. A. C. Gilpin, Esq.- U.N.Regional Representative, Lusaka.
6. F. Judd, Esq. - Secretary General, I.V.S.
7. S. Hoelgaard, Esq. and Mr. Glen-Davies - UNICEF.

CHAPTER II

C O M M U N I C A B L E D I S E A S E S

1. TUBERCULOSIS

GENERAL:

While the T.B. Control Project continued to develop satisfactorily during the first six months of the year, progress was drastically hampered during the second half of the year because of the inconsiderate transfer of staff painstakingly trained during the past years. Nevertheless, the period under review was marked by a far-reaching achievement as far as tuberculosis control is concerned.

For the first time in Swaziland, a National Tuberculosis Control Programme meant to approach the problem from a public health point of view, as against the purely clinical one, the usual approach until recently, became operational, thus marking a crucial point in the history of tuberculosis control in this country.

The programme was prepared in detail during the previous year on the basis of the epidemiological knowledge and experience acquired by the WHO-UNICEF assisted Tuberculosis Control Project, and was formulated to satisfy four basic requirements:

1. Epidemiological considerations which required that the programme be applied on a country-wide scale and on a permanent basis since patchy or sporadic application of anti-tuberculosis measures has no significant or progressive impact on the problem.
2. Sociological considerations which demanded that the programme be adapted to the existing and real needs of the population.
3. Administrative considerations that made it mandatory to integrate the programme into the general health services.
4. Economic considerations that required the programme to be such that its application on a national scale would be within the resources available.

The National Tuberculosis Control Programme whose implementation was initiated in Manzini district, contemplates the uniform utilization of standardized anti-tuberculosis means and their country-wide application with the basic aim of bringing essential tuberculosis services within the reach of the entire community.

For this purpose, simple but essential diagnostic and treatment services started to be established within existing general health centres (i.e. hospitals and rural and industrial clinics), which in turn, started to offer these services to the population within their

reach as an integral part of their routine activities.

Diagnostic activities of these general health centres were concentrated on those patients who consulted because of respiratory symptoms, and mostly consisted of forwarding for investigation to the TB Centre's laboratory specimens of sputa collected from such symptomatic patients. Whenever possible, patients with respiratory symptoms were also referred to the TB Centre for a free chest X-Ray.

Patients thus detected and in need of chemotherapy, were offered free treatment at the health centre they originally consulted, or at any other health centre of their choice co-operating in the fight against tuberculosis. Treatment was carried out on an ambulatory basis and consisted of one daily self-administration by the patients of the prescribed daily dosage of anti-tuberculosis tablets which were issued to the patients at monthly intervals. Supervision of treatment and investigation of treatment default was conducted by the staff in charge of the health centres administering treatment, assisted whenever necessary by a special team of "Home Visitors" from the T.B. Centre.

Throughout the year, the TB Centre provided these general health centres with its specialised services and technical advice, supervised their newly-integrated anti-tuberculosis activities and took care of all the functions that lay beyond their own capacities and equipment. Thus, besides performing bacteriological and radiological examination for the whole country and conducting treatment supervision on a national scale, the TB Centre trained the staff of twenty such health centres in basic tuberculosis control measures including recording and reporting procedures.

It also maintained contact between all health centres carrying out anti-tuberculosis work, co-ordinated their specialised activities set standards, and by keeping the National TB Register in order, was able to guide and help the health centres involved in their efforts of supervising the patients under their care and prevent and "cure" treatment default. In this connection, however, it must be pointed out, that in spite of re-iterated efforts to this effect, the staff of these general health facilities still did not, by the end of the year fully appreciate the basic necessity and importance of the new-introduced, standardized recording and reporting procedures, a sine qua non of any comprehensive, nation-wide anti-tuberculosis programme.

In addition to the country-wide establishment of diagnostic and durative tuberculosis services, the National Tuberculosis Control Programme also contemplates the creation of a preventive service based upon BCG vaccination, combined with inoculation against Smallpox.

Owing to the epidemiological situation, it was decided to focus the vaccination service on the age group nil to 14 years of age. Field trials having proved that a very high percentage of this age group could be contacted through the numerous schools covering the country, it was also decided to utilize these schools as vaccination centres, not only for school children, but also for pre-school children and non school attenders eligible for vaccination. Preparation of a plan of operations based on these lines was initiated late in the year.

Besides offering its specialised services to the whole country, the Tuberculosis Control Centre's laboratory started to conduct on a probatory basis general laboratory investigations in view of its eventual transformation into the country's central public health laboratory.

A Government Medical Officer was appointed as counterpart to the WHO Senior Medical Officer thus opening the way to the eventual and complete assumption of the Tuberculosis Control Project's responsibilities by the Government Medical Authorities. Furthermore, as the first step towards the phasing out of the project's international staff, the WHO Statistician and the WHO X-Ray Technician left the country in July and December 1966 respectively.

OPERATIONAL ACCOMPLISHMENTS:

Origin of Patients:	Type of Examination to which subjected:	PERIOD:					
		1965:			1966:		
		No. exam:	No. +	% +	No. exam:	No. +	% +
Patients who attended TB Centre of their own accord.	Bact. exam:	2145	181	8.4	2617	213	8.1
	X-Ray exam:	2079	417	20.	2594	265	10.2
Patients who were referred to the TB Centre	Bact. exam:	847	61	7.2	757	66	8.7
	X-Ray exam:	821	128	15.6	869	164	18.8
Patients who attended other Health Centres.	Bact. exam:	2128	476	22.3	3590	468	13
	X-Ray exam ⁺	12749	203	5.7	7645	239	3.1
TOTAL:	Bact. exams:	5120	718	14	6964	747	10.7
	X-Ray exams:	15649	1042	6.6	11108	668	6

⁺ Note: includes X-Rays taken by Mobile X-Ray unit at industrial centres.

In addition to the above figures, (which refer to case-finding only), the project also performed during the year under review a total of 5083 bact. examinations of which 1724 were repeat, and 3359 were follow-up examinations. In addition to the diagnostic X-Ray examinations above

quoted, the project also performed a total of 2158 follow-up X-Rays.

According to the figures entered in the National TB Register and provided by the general health centres, 574 patients in need of chemotherapy initiated treatment in 1966 all over the country.

At the end of the year the National TB Register contained information on 2226 patients, made up as follows:

Cases (patients excreting tubercle bacilli, when detected)	891
Suspects (patients with X-Ray pulmonary lesions, suspicious of TB, but not excreting tubercle bacilli when detected)	1098
Contacts	237
	<hr/>
	2226

The number of TB deaths, according to the TB register for 1966 was 122.

2. MALARIA: The Report covers the transmission period 1st July, 1965 to 30th June, 1966.

SUMMARY: Plasmodium falciprum is still the most common parasite encountered. Of the 277 positive blood smears P. falciprum was present in 199 cases as a single infection. It was also found in 11 cases with P. malaria and one case with P. vivax.

As in previous years cases are still being imported into the territory especially from Mocambique. The annual parasite incidence (A.P.I.) was 1.11 per thousand and the annual blood examination Rate (A.B.E.R.) was 13.74 of the population at risk. In 1964/65 this population was estimated at 107000 but the territorial census in early 1966 showed this figure to be grossly underestimated. The figure now used is 193,000, which includes 51,000 in the maintenance phase and 144,000 in the consolidation phase. 26,860 blood smears were examined by the three microscopists.

ANALYSIS OF BLOOD FILMS EXAMINED

<u>Source</u>	<u>Negative</u>		<u>Positive</u>		<u>Total</u>	
	1964/65	1965/66	1964/65	1965/66	1964/65	1965/66
Indigenous	23630	22217	76	102	23706	22319
Immigrants and cryptic	4097	4434	108	115	4205	4541
	27721	26651	184	217	27911	26860

The immigrants originated from the following sources:

<u>Source</u>	<u>Negative</u>		<u>Positive</u>		<u>Total</u>		<u>% Positive</u>	
	Blood Smears	Blood Smears	Blood Smears	Blood Smears	1964/65	1965/66	1964/65	1965/66
	1964/65	1965/66	1964/65	1965/66	1964/65	1965/66	1964/65	1965/66
Mocambique	2057	1814	93	83	2150	1897	4.3	4.4
Zululand	661	1071	4	6	665	1077	0.6	0.6
Transvaal	1291	1490	6	11	1297	1501	0.46	0.7
Other	88	59	5	15	93	66	5.37	22.7

Forty one per cent of the P. falciprum cases showed gametocytis. These case were present in all age groups.

METEOROLOGICAL

1. CLIMATIC CONDITIONS.

Unusually heavy rains occurred in the bushveld areas during January and February. A gambiae breeding was, as a result, fairly widespread during January to May, the majority of malaria cases occurring during April and May.

The meteorological records from various bushveld stations are reflected in the following table:

METEOROLOGICAL REPORT

MANZINI

STEGI

BIG BEND

MHLUME

GOLLEL

Month	Altitude 2,000 ft			Altitude 2,200 ft.			Altitude 500 ft.			Altitude 850 ft.			Altitude 600 ft.		
	Rainfall: in ins.	Max.	Min.	Rainfall in ins.	Max.	Min	Rainfall in ins.	Max.	Min	Rainfall in ins.	Max.	Min.	Rainfall in ins.	Max.	Min
July 1965	0	74.3	49.0	0	71.7	49.5	0.04	78.8	44.6	0	-	-	0.04	77.4	52.7
August "	2.17	77.3	53.1	2.92	75.6	53.2	3.18	84.2	50.0	0.80	85.0	53.0	2.26	80.6	50.0
Sept. "	2.52	78.7	54.9	1.34	75.9	56.4	0.95	82.4	56.3	0.95	85.0	56.0	0.51	81.5	57.2
Oct. "	3.54	78.3	54.6	1.75	71.1	53.8	2.26	82.4	55.4	1.81	86.0	56.4	1.71	83.3	59.5
Nov. "	5.61	73.4	49.9	3.45	77.9	58.9	1.66	-	-	3.43	86.0	63.0	1.34	86.9	63.3
Dec. "	3.00	84.5	63.3	2.95	85.1	61.6	1.97	90.5	68.9	3.58	91.7	66.0	1.43	92.3	66.1
1965	10.63	88.16	68.36	22.64	83.12	67.46	9.82	82.94	66.74	13.97	90.2	70.2	11.22	-	-
Jan. 196	8.31	76.08	66.2	5.0	81.68	61.16	3.72	83.48	72.32	6.59	86.9	66.8	4.83	-	-
Feb. "	2.09	84.74	63.14	0	84.74	63.5	0.22	77.9	63.5	0.50	86.9	62.4	3.37	-	-
March "	1.56	77.18	55.94	0.61	76.46	58.06	0.94	84.2	55.4	0.64	86.2	56.5	0.65	-	-
April "	0.35	79.58	51.96	0.35	66.2	54.68	0.04	75.22	62.96	0.55	78.7	51.0	1.08	-	-
May "	0.47	74.71	50.93	2.76	84.38	54.5	0.24	77.95	47.21	0.86	78.6	48.1	0.31	-	-
June "															

2. ANNUAL STAFF MEETING:

At the annual staff meeting held at Manzini during the first week of August, individual problems were discussed and the staff were informed of their duties for the new malaria season.

3. POPULATION AND HUT COUNT.

This was not done by the malaria staff but figures available from the Territorial census carried out during May 1966 are as follows:

Maintenance phase	:	51,000
Consolidation phase	:	<u>144,000</u>
Total	:	<u>195,000</u>

4. MALARIOUS AREAS:

The boundaries of certain areas were re-defined and in some cases areas were reduced. This has enabled field assistants to cover their areas in less time and also saved time in not working unnecessary sections where no trouble was anticipated.

5. MEETINGS:

In view of the considerable misunderstanding about the objects of our work, meetings were held with chiefs, indunas and others at the following places in order to explain our aims and objects:

Mpaka
Nyetane
Lukula
Ngomane
Nkamanzi
Border Gate
Magomba
Nomahasha
Majembeni
Mpolonjeni

6. MALARIA CONTROL MEASURES:

(a) Residual Spraying. with Benzine Hexachloride 12% Gamma Isomer wettable powder, was carried out at Border Gate, Sivunga and Big Bend. Technical D.D.T. was also used at Big Bend. Particulars are as follows:

Date	Place	No. of Huts Sprayed	A.A.D. for A. Gambiae before Spraying	A.A.D. for A. Funestus gr. before Spraying	A.A.D. for A. Gambiae shortly after spraying	A.A.D. for A. Funestus Gr. shortly after spraying
December	Sivunga	248	1.2	1.9	0	0.19
December	Border Gate	221	1.5	0.1	0	0
March	Picardi's Estates Big Bend	68	8.0	-	0	-
March	Mfula Planters Big Bend	75	2.0	-	0	-
March	Harmonie Big Bend	62	6.0	-	0	-
5-11	Total No. of Huts	716				
	B.H.C. used	180 lbs				
	D.D.T. used	3 lbs				
	No. of Huts per lb. of B.H.C.	3.9				

2. SIVUNGA.

3. BORDER GATE.

4. BIG BEND.

At Harmonie however, after 7 weeks the A.A.D. for A. Gambiae was 2 and after 9 weeks it was 0.2. Thereafter due to the onset of the cold weather probably it was 0 up to the end of June.

Big Bend Ranches
Mfula Planters, Big Bend
Picardie Estates Big Bend
Harmonie " "
Poortzicht " "
Canterbury " "
Hilton Barber, Tshaneni
Thompson Crammond, Tshaneni

(c) Drug Prophylaxis .../

(c) Drug Prophylaxis: All employers of labour in the malarious area were requested to issue Darachlor to employees visiting Mocambique in an attempt to further reduce the incidence of parasite carriers. In the case of Thambankulu Estates it was found to be more practical to dose all foreign labour weekly with Darachlor instead of trying to keep track of and dosing those visiting malarious areas and other countries, where malaria is indigenous.

Drug prophylaxis was instituted at the following places:

Volinde	(Darachlor)
Mpofu	"
Nkamanzi	"
Ngomane	"
Bar J. Ranch Big Bend	"
Mkhayahovu Big Bend	"
Langa	(Daraprim)

(d) Surveillance Operations were continued by the field staff who were concerned mainly with routine blood taking, hut space spraying and larval collecting.

7. PARASITOLOGY:

Blood slides taken during the year were examined at the Health Office Manzini by four Microscopists and the following results were recorded:

<u>SOURCE</u>	<u>NEGATIVE</u>	<u>POSITIVE</u>	<u>TOTAL</u>	<u>SPECIES</u>
Indigenous	22217	102	22319	
Immigrants	4434	107	4541	
Cryptic	—	8	—	
Combined	26651	217	26860	
Annual Parasite Incidence		1.11		Plasmodium falciparum 199
Annual Blood Examination Rate		13.74		" Malariae 6
				" Falcip/Malar 11
				" Falcip/Vivax 1

Immigrants originated from the following sources:

<u>SOURCE</u>	<u>NEGATIVE</u>	<u>POSITIVE</u>	<u>TOTAL</u>	<u>% POSITIVE</u>
Mocambique	1814	83	1897	4.4
Zululand	1071	6	1077	0.6
Transvaal	1490	11	1501	0.7
Other	59	7	66	10.6
	4434	107	4541	2.1

8. ENTOMOLOGY .../

8. ENTOMOLOGY.

- (a) Hut Space Spraying. The results of this work carried out by the field staff were as follows:

No. of Huts tested	:	13,904	(Excludes space
No. of A. Gambiae found	:	859	spraying mentioned i
No. of A. Funestus group found	:	334	8(c) as follows:
No. of other Anophelines found	:	469	

135	A Pretoriensis
84	A. Listeri
61	A. Coustani
58	A. Marshalli
49	A. Rufipes
23	A. Squamosus
14	A. Cinereus
7	A. Demeilloni
2	A. Maculipalpis
2	A. nili
34	Unidentifiable Anophelines

- (b) Larval Searching. The field assistants on the irrigation schemes and the mobile teams carried out larval searching during part of September. Larval searching was also carried out at other times as and when necessary, results of identifications being as follows:

A. Gambiae from Dokolwako, Tshaneni, Mpaka, Nsoko, Ngomane, Nkambeni, Sivunga, Mpofu, Big Bend, Nyakatho, Nkalashane, Qandatshe.

29 A. Funestus type from Sivunga and Nyakatho.

Other Anopheles larvae identified were:

A. Maculipalpis
A. Pretoriensis
A. de Meilloni
A. Rufipes
A. Rivolorum
A. Leesonii
A. Marshalli
A. Coustani

- (c) Assessment of Behaviouristic Changes. Entomological surveys were conducted in certain areas where indigenous malaria cases occurred in order to assess possible behaviouristic changes. The following table reflects these special investigations:

DATE	PLACE	MAN-BAITED NET OUTSIDE		MAN-BAITED NET IN A HUT		MOSQUITOES BITING MAN OUTSIDE
9 - 11th November, 1965	M. Johnson	159 A. Marshalli		38 A. Marshalli		81 A. Marshalli
	Volinde	15 A. Coustani		3 A. Coustani		2 A. Coustani
		1 P. Pretoriensis		1 A. Maculipalpis		
12th-13th January, 1966	Mpofu	3 A. Pretoriensis				1 A. Pretoriensis
27th-28th January, 1966	Map. Ref. 1/8	3 A. Coustani				4 A. Coustani
		11 A. Squamosus				13 A. Squamosus
						1 A. Rufipes
25th-27th January, 1966	Mpofu	14 A. Coustani				6 A. Coustani
	Map. Ref. H/8	5 A. Squamosus				4 A. Squamosus
10th-12th May, 1966		18 A. Marshalli				
		1 A. Squamosus				
	Langa	1 A. Demeillonii				0
	Map Ref. S/28	1 A. Coustani				
17th-18th May, 1966	Tulwane	1 A. Listeri				0
22nd June, 1966	Map Ref. J/28					
1st-3rd June, 1966	Nyakato					
9th-10th June, 1966	Map Ref. 1/10	0		0		0

CALF-BATTED NET	WINDOW CASE TRAPS	SPACE SPRAYING	LARVAL COLLECTIONS	REMARKS
	4 Traps-- 0 Anophelines	1 Funestus GR 1 0 Huts 9 A.marshalli 6 A.listeri 2 A.gambiae 1 A.pretoriensis	24 A.m rshalli 23 A.coustani 11 A.maculipalpis	2 Indigenous Malaria cases
		12 Huts 0 Anophelines	No A.gambiae or A.Funestus Type Larvae	5 Indigenous Malaria Cases
5 A.coustani 45 A.squamosis 1 A.maculipalpis 1 A.pretoriensis 2 A.gambiae	3 Traps-- 0 Anophelines	2 Huts 0 Anophelines	No A.gambiae or A.Funestus type larvae	1 Indigenous Malaria case
120		4 Huts 0 Anophelines	No A.gambiae or A.funestus type larvae	5 Indigenous Malaria cases
		3 Huts 3 A.listeri	No A.gambiae or A.funestus type larvae	4 Indigenous Malaria cases
		43 Huts-- 51 A.funestus GR. (49 + 20)	2 A.funestus type 24 A.gambiae	2 Indigenous Malaria cases. See Sect. (d) for results of Precipitin tests.

All shelters were dug and inspected periodically in areas where exophily was suspected. Results were as follows:

Date	Area	Result
31.3.66	Mpofu H/8	0
7.4.66	" "	1 A.gambiae and 1 A.marshalli
15.3.66	" "	1 A.rufipes
31.4.66	" 1/8	1 A.gambiae
7.4.66	" "	2 A.gambiae and 1 A.funestus gr. 1 A.pretoriensis 1 A.rufipes 1 A.
15.4.66	" "	2 A. funestus gr. a A. rufipes
19.4.66	" "	1 A.gambiae 1 A.funestus gr. 1 A. maculipalpis
20.5.66	Tulwane J/28	1 A.funestus gr. a A.cinereus
22.6.66	" "	8 A. " " (8 1) 2 A.cinereus
24.6.66	" "	0 A. " " 1 A.demeilloni
10.6.66	" "	3 A. " " A.listeri
11.5.66	Langa S/28	3 A. marshalli 4 A.rufipes
17.5.66	" "	0
18.5.66	Gundwini E/32	10 A.listeri 1 A.pretoriensis 1 A. marshalli
10.6.66	" "	1 A.funestus gr 1 A.pretoriensis
20.6.66	" "	4 A. cinereus 1 A.pretoriensis 1 A.marshalli
24.6.66	" "	4 A. cinereus 1 A.pretoriensis 1 A.marshalli
9.6.66	Nyakatho 1/10	7 A. funestus gr (6 1)
10.6.66	" "	16 A. funestus gr
14.6.66	" "	10 A. funestus gr.
16.6.66	" "	12 A. funestus gr. (11 1)

Conclusions.

At Mpofu no A. gambiae were found indoors. Outside biting and resting may therefore have been taking place (6 indigenous cases).

At Tulwane no A. gambiae or A. funestus were found indoors. It was not possible to establish whether the outside resting A. funestus gr. were A. funestus type (4 Indigenous cases)

A.langa, no vectors were ever found. (5 Indigenous cases)

At Gundwini, 1 A. gambiae was found indoors (3 Indigenous cases)

At Nyakatho, A. funestus gr. was no found to be biting man (see results of Precipitin Tests: Section 8 (d). 1 A.gambiae was found in a hut in March 1966 and A.gambiae larvae only in June, 1966.

Exophagy by A. gambiae was not established but could possibly exist.

(2 Indigenous cases)

(d) Precipitin .../

(d) PRECIPITIN TESTS:

Precipitin tests were carried out at the Health Office, Manzini with Anti-Human Rabbit Precipitating sera obtained from Messrs. Burroughs Wellcome and Co. Results were as follows:

A. GAMBIAE						A. FUNESTUS GR.			
Date	Locality	No. tested	No. +ve For Man	Man Biting Rate	Av. Hut Density	No. tested	No. +ve For Man	Man Biting Rate	Av. Hut Density
24.9.67	Nyakato					5	0	0%	2.5
12.10.65	Sivunga	14	6	43%	0.9	11	0	0%	0.7
30.11.65	Sivunga	15	10	67%	1.2	40	1	2.5%	1.9
7.12.65	Border Gate	20	4	20%	1.5	3	0	0%	0.1
20.1.66	Sigcaweni	4	0	0%	0.45				
21.1.66	Qandatshe	12	0	0%	4.0				
11.2.66	Canterbury, Nsoko	13	13	100%	1.3				
15.2.66	Picardie, Big Bend	16	16	100%	8.0				
25.2.66	Harmonie Big Bend	10	7	70%	6.0				
25.2.66	Mkhofeni, Big Bend Ranches	3	1	33.3%	0.6				
4.3.66	Magongolweni	12	0	0%	4.4				
9.3.66	Phuzamoya	4	0	0%	0.6				
15.3.66	Hilton Barber S.I.S. Tshaneni	3	1	33.3%	1.0				
1.4.66	Ngomane	8	4	50%	2.0				
26.5.66									
10.6.66	Nyakatho					35	0	0	1.1
14.6.66									
27.6.66	+ Nyakatho					46	0	0%	All ex Pit Shelters (in cludes 7 mammal and 2 negative).

3. POLIOMYELITIS

Oral anti polio vaccine.

	1st.	2nd.	3rd.	Booster
Health Office Manzini	502	260	133	62
Red Cross Clinic Manzini	199	84	24	-
	<u>701</u>	<u>344</u>	<u>157</u>	<u>62</u>

26 cases were reported with no deaths.

4. DIPHTHERIA

Triple Vaccine (D.P.T.)

	1st	2nd	3rd	Booster
Health Office Manzini	66	41	29	11
Red Cross Clinic Manzini	180	62	24	-
	<u>246</u>	<u>103</u>	<u>53</u>	<u>1</u>

Diphtheria Tetanus Vaccine	1st	2nd	3rd	Booster
	18	15	11	10

39 cases were reported with 1 death.

5. SMALLPOX

Vaccinations against smallpox

		<u>Primary</u>	<u>Re-vaccination</u>	<u>Total</u>
Health Office Manzini	(a) Field	15631	26423	42054
	(b) Office	245	2775	3020
Red Cross Clinic Manzini		127	-	127
Health Centres				3127
Government and Mission Hospitals				3094
			Total	<u>51,421</u>

73 cases occurred during the year with 3 deaths.

6. VENEREAL DISEASE.

Figures for attendance at Government and Mission Hospitals and clinics are appended:

	<u>Syphilis</u>	<u>Gonorrhea</u>
1963	2419	3889
1964	8590	13717
1965	11915	14432
1966	9242	13327

7. LEPROSY.

REPORT OF MBULUZI LEPROSY HOSPITAL

The statistical charts at the end of this Report will show that the work at the Leprosy Settlement has remained at about a plateau with previous years.

The treatment has remained approximately the same with the standard usage of the drugs D.A.P.D.S. plus Bland's Pills and yeast. Naturally there are variations to this to take care of complications when needed.

The school at the Settlement functioned during the year, with a total of eight students. It was taught by Patient Tandi Fakude.

During the year the population at the Settlement remained the same with 26 admissions and 26 discharges.

The farm has continued to render efficient and needed supplemental help with the food problem and there are well over 60 head of cattle with numerous goats and chickens, all taken care of by Settlement Personnel.

The grant from the Oxford Committee for Famine Relief has continued to be a great boon during the year and has helped considerably with the farming.

It has been a tremendous boost to the morale of the patients as well as the Staff to see the number of interested organisations and individuals who have come to the Leprosy Settlement during the year and have done so much to raise the level of morale. Regular visits by Mr. C.B. Pretious of the Red Cross, as well as members of the Rotary Anns and the Rotary Club have been of great practical benefit.

The Christmas Party, as usual, was the highlight of the year with a number of outstanding personalities attending. The guest list included Sir Francis and Lady Loyd, Her Majesty's Commissioner for Swaziland, Dr. and Mrs. Charles Runciman, Mr. A.Z. Khumalo, Member for Health, and Mr. and Mrs. Donald R. Day, Director of Education, Swaziland Government.

The clinical manifestations of the disease have been similar to that of previous years. The types of complications treated are roughly as follows:

Trophic ulcers - approximately 17 per day were treated and dressed. Lepara reactions amounted to 7 per day.

Blindness - 2 cases	Malnutrition - 3 cases
Diarrhoea - 36 cases	Dental Caries - 18 cases
Burns - 19 cases	Gangrene of the digits - 6 cases.
Conjunctivitis - 11 cases	Epistaxis - 1 case
Catarrhal colds - the usual number.	

There was one death due to cancer of the bone.

There are a number of needs for equipment which can be itemised:

Four walkers - preferably of the aluminum tubular type.
Crutches - at least six pair, and
Assortment of instruments for the dressing tray.
Dental forceps for extractions
An instrument tray for sterilising instruments
Two and 20 cc. syringes with No. 22 and No. 21 gauge needles.

There is also a need to pipe water into the ward. Screens are rather badly needed on some of the windows at the Leper Hospital, as well as in some of the Staff quarters.

Following are the statistical studies of interest:

I Additions to Leprosy Hospital Population.

	<u>Males</u>	<u>Females</u>	<u>Total</u>
Admissions	7	6	13
Readmissions	<u>8</u>	<u>5</u>	<u>13</u>
	15	11	26

II Losses to Population

Deaths	1	1	2
Desertions	1	-	1
Discharges	17	9	26

III Origin of Patients

Stegi	2	-	2
Mbabane	10	5	15
Manzini	1	-	1
Mankaiana	2	-	2
Piggs Peak	3	-	3
Entshanini	1	-	1
P.E.A.	1	-	1
Hluti	1	-	1
Emvenbile	2	-	2

IV Duration of Disease before Admission:

Duration	Admissions	26.
0 - 1 yr.	2	
1 - 2 yrs	15	
2 - 3 yrs	1	
4 +	8	

V Classification on Admission

<u>Type</u>	<u>Males</u>	<u>Females</u>	<u>Totals</u>
Lepromatous	4	4	8
Neural	12	6	18

VI Average Age on Admission. 35 years.

VII Proportion of Children to total admissions: 4 children
22 adults

VIII Laboratory Report.

Positive (Skin Smear)	Negative (Skin Smear)
Lepromatous 7	7

IX Average Monthly Census.

<u>Men</u>	<u>Women</u>	<u>Children</u>	<u>Total</u>
		<u>Male</u> <u>Female</u>	
21.9	12.9	4.4 3.6	42.8

May I express the deep gratitude of the Staff by sincerely thanking the officers of the Medical, Agricultural, Veterinary and Public Works Department who have all had a major part in the efficient functioning of the Leprosy Settlement. In addition our sincere thanks to the Church of the Nazarene and the Raleigh Fitkin Memorial Hospital under whose care the clinical work of the Leprosy

Settlement is maintained. It is through them that the Staff of the Leprosy Settlement is supervised and also furnished.

The Mission to Lepers have furnished most needed financial aid and other types of support, without their help the Leper Settlement could not have functioned at the level at which it has.

To the numerous friends who have been so generous with their time and donations, we thank you.

Medical Superintendent, R.F.M. Hospital and its
Ancillary Institutions.

8. BILHARZIA

(a) Ecological Surveys.

R.C. WEIR. MZIMNENE RIVER, MANZINI

Although this study has been concluded it was decided in view of the exceptionally heavy rainfall in January viz. 189.5 mm. to carry out a further survey to ascertain the scouring effect on the snails. The following is the result of this survey carried out on the 24th January:

3 mm.	3 mm.	6 m..	Total	No. Shedding Cercariae
0	0	24	24	7

TUNG OILS UPPER DAM

WATER		BIOMPHALARIA				PHYSOPSIS				RAINFALL
Month	Temp. °C	3 mm	3 mm	6 mm	Total	3 mm	3 mm	6 mm	Total	in mm
Jan.	72	0	8	83 (12)	91 (12)	0	6 (1)	62 (10)	68 (11)	2670
Feb.	85	2	14 (2)	87 (8)	103 (10)	7 (4)	33 (6)	56 (24)	96 (34)	1550

FIGURES IN BRACKETS = DEAD SNAILS
RAINFALL FIGURE FOR IANZINI.

-27- Due to pressue of work in malaria control t is survey was abandoned.

(b) BILHARZIA CONTROL PILOT PROJECTS.

(i) Phonjwana, Lubombo District.

Re-Survey		<u>DAM</u>			<u>STREAM</u>		
		0 Physopsis	95 B. Forskali	0 Physopsis	1 B. Forskali	"	"
"	2/2/66	"	166	"	0	0	"
"	24/3/66	"	2	"	0	0	"
"	22/9/66	"	0	"	0	0	"
"	27/10/66	"	0	"	0	0	"
"	30/12/66	"	0	"	0	0	"

(ii) NOMAHASHA LUBOMBO DISTRICT

Re-survey Police Dam 5.4.66	-	34	Biomphalaria	1	B. Forskalii					No children were allowed to swim in this dam.
Re-survey Police Dam 14.7.66	-	0	"	0	"		1	Physopsis		
1st Application of Bayluscide 14.7.66										
Survey of 2 other dams 14.7.66	-	0	"	0	"		0	"		+ Tropigus
Re-survey Police Dam 26.9.66	-	0	"	0	"		0	"		
<u>Survey of Swamp</u>	"									
1st Application of Bayluscide to swamp 28. .66	-	0	"	0	"		45	"		
Re-survey of swamp 29.9.66	-	0	"	0	"		3	(29)	"	29 = Dead Snails
2nd Application of Bayluscide to swamp 29.9.66	-	0	"	0	"		0	"		328 Tropigus 87 Forskalii 14 Lymnaea.

(c) SNAIL CONTROL PILOT PROJECTS

(i) "THANDELIZWE", MANZINI DISTRICT.

<u>MAIN STREAM</u>						<u>TRIBUTARIES</u>							
Re-survey	30.9.66	0.	Physopsis	14	Lymnaea	1	B. Forskalii	0	Physopsis	4	Lymnaea	12	B. Forskalii
"	4.11.66	0	"	58	"	4	"	"	"	7	"	6	"

(d)

(ii) SAND RIVER DAM - S.I.S. - TSHANENI

As a result of an approach by the authorities at S.I.S. it was agreed that we would attempt snail control in the portion of the dam fronting the Boating Club House where members set out with their boats and so make contact with the water at the edges.

		<u>Biomphalaria</u>	<u>Physopsis</u>	<u>Lymnaea</u>	<u>Tropicus</u>
6.5.66	Survey of 200 yds. in front of Club house	14	18	6	
6.5.66	Application of Bayluscide to same 200 yds.				
10.5.66	Re-survey	19(2)	8	0	4(1)
13.5.66	"	6(2)	1(1)	0	0
"	Application of Copper Sulphate				
20.5.66	Re-survey	4(6)	2(3)		
20.5.66	Application of Copper Sulphate	10(4)	4(1)		
	Application of Bayluscide				+300 yds.
27.5.66	Re-survey	? 1(38)	? 1(4)		+ either 1 Bio or 1 Phys.
3.6.66	Re-survey	0(44)	1(5)		
"	Application of Copper Sulphate				
10.6.66	Re-survey				
	Application of Copper Sulphate	0(29)	0		
17.6.66	Re-survey				
	Application of Copper Sulphate	2(20)	1(3)	0	0
24.6.66	Re-survey				
	Application of Copper Sulphate	11(71)	4(5)	0	0

N.B. 1. Bayluscide applied by knapsack sprayer.

2. Copper Sulphate applied by mixing with sand and broadcasting by hand.

3. Figures in brackets indicate dead snails.

4. It is not known with certainty whether the proportions of live to dead snails as indicated on 1st July, 1966 and 8th July, 1966 are correct.

5. On 16th September, 1966, \pm 100 yards which amounted to half the area under control, were treated with copper sulphate applied by means of a pump and the other half of the area was treated with copper sulphate and sand mixture applied by hand.

On 19th September, 1966 a survey was carried out and the results obtained were compared.

These results do not establish the superiority of the one method over the other, but it was found that the pump method required less copper sulphate and was quicker.

SNAIL CONTROL AT SAND RIVER DAM - S i. S. - TSHANENI.

	Survey	- 6(87)	Biophalaria	2(2)	Physopsis	+	Application of Copper Sulphate	
1.7.								
7.7.66							" "	Bayluscide
8.7.66	"	- 0(76)	"	0(8)	"			
11.7.66	"	-33(21)	"	15(7)	"			
15.7.66	"	-42(138)	"	0(4)	"	+	Application of Copper Sulphate	
22.7.66	"	- ?		?		+	" "	" "
29.7.66	"	-54(207)	"	4(13)	"	+	" "	" "
5.8.66	"	-				-	-	-
12.8.66	"	51(56)	"	5(7)	"	+	" "	" "
19.8.66	"	48(164)	"	1(3)	"	+	" "	" "
26.8.66	"	?	"	?	"	+	" "	" "
2.9.66	"	-	"				-	-
9.9.66	"	?	"	?	"	+	" "	" "
16.9.66	"	9(9)	"	0	"	+	" "	" "
16.9.66	"	3(2)	"	0(1)	"	+	" "	" "
19.9.66	"	13(4)	"	21(3)	"	-	(⁺ 100 yards treated by pump)	
19.9.66	"	33(9)	"	8(5)	"	-	(⁺ 100 yards treated by Sand Broadcast).	

Ref. Footnotes on page 4.

6. During October, the control of snails was handed over to SIS. One of their employees was trained in snail collecting and the application of Copper Sulphate.

(e) MOLLUSCICIDAL TRIAL WITH BAYLUSCIDE.

Bayluscide was successfully tried in apportion of a dam at Matspha School during January. This dam, however, proved unsatisfactory for further trials as it was too overgrown in parts.

A new dam was therefore chosen viz. Francis Dam, Manzini. Particulars of work done here are as follows:

<u>Preliminary Survey</u>	3.2.66	374	Physopsis
1st Application o' Bayluscide	3.2.66	4 oz. used.	
<u>Re-survey</u>	11.2.66	9	Physopsis
2nd application of Bayluscide	11.2.66	6 oz. used	
<u>Re-survey</u>	18.2.66	0	Physopsis

The concentration of Bayluscide aimed at was 0.5 P.P.M.

(f) MISCELLANEOUS SNAIL SURVEYS.

23/2	S.I.S., Tshaneni	Portion Sand River Dam	1	Physopsis	5	Biophalaria
16/3	D. Anderson, Plot 24, Manzini Est.	Dam	9	"	0	"
		Stream + 100 yds	1	"	0	"
		Below Dam	0	"	0	"
		Reservoir	0	"	0	"
16/3	C. Roberts, Plot 25, Manzini	1st dam	1	"	0	"
30/3		2nd dam	3	"	0	"
		3rd dam	0	"	0	"
		Spring	0	"	0	"
21/3	Manzini	Ghobaghoba Stream	37	"	0	"
		Mzimnene River few 100 yards below oxidation ponds	55	"	7	"
23/3	Manzini					

One Biophalaria was found on dissection to be infested with mammalian cercariae which suggests the possibility of S. manzoni transmission in Manzini.

30/3 J. Potgieter, Plot 23 Manzini Est. Few pools in stream 0 " " 0 " "

2/5- Old Hyaro, Matsapa Dam for Domestic Supply 10 " " 10 " "

(g) BILHARZIA SKIN ANTIGEN TESTS.

Skin antigen tests with W.H.O. Reference Skin Test Antigen (Melcher's sterile acid-soluble protein fraction or *S. manzoni* adults) were performed on 20 people from the Sidney Williams School, 19 of whom had bathed in Mzimnene River in Manzini.

Whilst 10 of these were positive, a number of urine specimen from all 20 and 2 stool examinations from each of 18 were negative.

(h) PROPAGANDA.

Talk on Bilharzia. As a result of the concern of the Head Teacher about the high incidence of schistosomiasis amongst his pupils, a talk was given on Bilharzia prevention to the pupils of Madubeni North School, Hho Hho district.

Southern Swaziland Show. A Bilharzia exhibit was arranged at the Southern Swaziland Show at Goedgegun.

Swaziland Show Manzini. A Bilharzia exhibit was arranged at the Swaziland Show Manzini.

Lecture on Bilharzia - Agricultural College - Luyengo. A lecture on Bilharzia and Malaria was given to domestic science demonstrators attending a training course at the Agricultural College at Luyengo.

(i) Urine and stool examinations at the Health Office, Manzini
440 urines and 19 stools were examined at the Health Office, Manzini for Bilharziasis.

HEALTH INSPECTOR.

CHAPTER III

GOVERNMENT AND SUBSIDISED MISSION HOSPITALS AND CLINICS:

1. Comparative tables for three years, setting out the staffing of Government hospitals, and the admissions, attendances, etc. at Government and subsidised Mission hospitals and clinics, follow:

1.1. Government and Subsidised Mission Hospitals and Clinics:

	1964	1965	1966	1964	1965	1966	1964	1965	1966	1964	1965	1966	1964	1965	1966	1964	1965	1966	1964	1965	1966
Hospital Staff:																					
Medical Officers	5	5	5	3	3	4	-	-	-	1	1	1	-	1	1	-	-	-	9	10	11
Matron	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2
Nursing Sisters	7	8	9	3	4	4	1	1	1	-	1	1	-	1	1	-	1	1	11	16	17
Pharmacists	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2
Radiographer	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1
Housekeeper	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1
Medical Assist.	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1
Laboratory Asst.	2	2	2	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3
Dispensers	3	2	2	2	2	2	-	-	-	-	-	-	-	-	-	-	-	-	5	4	4
Pupil Dispensers	-	-	-	1	4	4	-	-	-	-	-	-	-	-	-	-	-	-	1	4	4
Nurses	36	49	49	33	39	40	6	7	7	9	9	9	-	1	4	-	5	5	84	106	114
OutPatient Attds.	3	3	3	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	4	4	4
Ambulance Drivers	2	2	3	2	2	2	1	1	1	1	1	1	1	1	1	-	1	1	7	8	9
Ward Orderlies	15	18	18	12	12	12	2	3	3	3	3	3	-	2	2	-	2	2	32	40	41
BEDS:																					
a) Full-paying	14	14	14	8	8	8	-	-	-	-	-	-	-	-	-	-	-	-	22	22	22
b) Part-paying	154	154	156	127	127	134	33	33	33	39	47	50	-	12	12	-	30	30	353	403	415
ADMISSIONS:																					
a) Full-paying	363	500	510	63	116	90	-	-	-	-	-	-	-	-	-	-	-	-	426	616	600
b) Part-paying	3699	4080	4549	3289	3668	4324	640	1059	932	1183	993	1475	-	122	635	-	160	185	8811	10082	12100
DAILY AVERAGE NO. OF IN-PATIENTS:																					
a) Full-paying	6.4	11.1	13.8	1.3	0.6	2.4	-	-	-	-	-	-	-	-	-	-	-	-	7.7	11.7	16.2
b) Part-paying	182.3	194.5	290.2	200.8	250.0	274.1	25.6	30.2	28.4	45.4	45.8	65.6	-	7.0	12	-	27.2	32.5	462.1	554.7	702.8
DEATHS:																					
	176	173	193	182	192	188	4	18	16	68	43	62	-	6	19	-	3	2	430	435	480
OPERATIONS:																					
a) Major	399	585	459	85	80	164	-	-	-	19	8	5	-	-	-	-	-	-	503	643	623
b) Minor	790	773	835	417	613	551	-	-	-	50	29	60	-	-	-	-	-	-	1257	1415	1386
XRAY:																					
a) Examinations	4005	5307	6215	2836	3513	3953	-	-	-	410	374	674	-	-	-	-	-	-	7441	9194	10168
b) Screening	167	131	142	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	171	135	142
OUTPATIENTS:																					
a) 1st Attendances																					
i) Full Paying	5251	4421	2919	648	364	130	-	40	54	137	167	222	-	-	390	-	-	-	6046	4992	4715
ii) Part Paying	19088	19895	21021	10095	12680	13285	3813	6404	6862	6541	9720	8134	11469	10805	8221	3565	5268	5174	54571	64772	62697
b) Sub. Attendances																					
i) Full Paying	2781	4362	3468	291	219	79	-	31	2	134	35	16	-	215	489	-	-	-	3206	4862	4054
ii) Part Paying	17529	35773	32311	5700	9328	11165	588	3040	941	4161	1518	1364	7157	5540	6200	990	1266	1011	36125	56465	52992
GRAND TOTAL:	44659	64451	60719	16734	22591	24659	4401	9515	7859	10973	11440	9736	18626	116560	15300	4555	6534	6185	99948	131091	124458

3. SUBSIDISED MISSION HOSPITALS:

-34-

		Raleigh Fitkin Memorial Hospital			Good Shepherd Hospital			Totals :		
		1964	1965	1966	1964	1965	1966	1964	1965	1966
BEDS:										
(a)	Full-paying:	15	15	15	5	5	5	20	20	20
(b)	Part-paying:	260	260	260	62	62	62	322	322	322
ADMISSIONS:										
(a)	Full-paying:	494	543	540	72	29	132	566	572	672
(b)	Part-paying:	7570	5500	5204	1353	1172	1575	8923	6672	6779
DAILY AVERAGE NO. OF IN-PATIENTS:	(a) Full-paying:	10.8	10.9	9.9	1.3	0.4	1.8	12.1	11.3	11.7
	(b) Part-paying:	278.2	299.0	262.0	40.9	43.1	47.3	319.1	342.1	309.3
DEATHS:		255	255	304	45	40	42	300	295	346
OPERATIONS:	(a) Major:	636	653	591	2	-	272	638	653	863
	(b) Minor:	1366	1385	814	125	145	35	1491	1530	849
X-RAY:	(a) Examinations:	3312	4169	3706	500	361	461	3812	4530	4167
	(b) Screenings:	-	-	-	24	20	-	24	24	
OUTPATIENTS:	(a) 1st attendances in (1) Full-paying Section:	3368	3003	2532	1076	656	955	4444	3659	3487
	(2) Part-paying Section:	13146	15763	13885	6022	6801	13703	19168	22564	27588
	(b) Subsequent (1) Full-paying Section:	1307	1829	1700	481	266	435	788	2095	2135
	Attendances in (2) Part-paying Section:	5799	9571	11181	1869	2411	3247	7668	11982	4428
GRAND TOTALS:		22620	30166	27298	9448	10134	18340	32068	40300	47638

4. SUBSIDISED MISSION CLINICS:

		Totals			Mission Totals		
		1964	1965	1966	1964	1965	1966
Nazarene Missions:							
Stegi		10104	8049	7302			
Tadlingeni		3661	4994	5105			
Pigg's Peak:		2736	2184	3968			
Mliba		2201	1696	2776			
Mafutheni		974	1055	1463			
Bhekinkhosi		1732	1574	3784			
Balegane		2242	1752	2406			
Malinda		2349	2574	3042			
Mayiwane		6372	5371	6871			
Tambankulu		9358	10106	10179			
Malandela		368	878	1025			
Lalela		1104	834	1143			
Thembelihle		1400	824	1593			
Manzana		447	712	345			
Kashewula		100	305	318			
Engculwini		-	2479	1590			
Esigcaweni				248	46697	45486	53158
Roman Catholic Missions:							
Our Lady of Sorrows:		11554	10172	9725			
St. Juliana		5745	10672	10401			
Methanjeni		-	1345	1061	22121	27523	21581
San Mechael				256			
San Boniface				138			

++ Visited by Nurse-in-charge at Our Lady of Sorrows

2. Government Clinics:

	Total Attendances:			District Totals:		
	1964	1965	1966	1964	1965	1966
<u>MBABANE DISTRICT:</u>						
Eluyengweni Clinic	11533	12396	16066	11533	12396	16066
<u>HLATIKULU DISTRICT:</u>						
Mhlosheni	6994	8574	8403			
Hluti	10229	14869	10221			
Sipofaneni	8748	11639	9508			
Vimy Ridge	1492	1632	983			
Edwaleni +++	1700	6076	6473			
Lubuli+	5362	7158	6570			
St. Phillips Mission ++	4193	5055	4921			
New Haven Mission ++	12653	13253	15838	51371	68256	62917
<u>MANKAIANA DISTRICT:</u>						
Mahlangatsha	6566	6339	7634			
Dwalili	6644	6767	7241	13210	13106	14875
<u>PIGGS PEAK DISTRICT:</u>						
Horo	15372	19225	15090			
Lesters +	4504	8535	11634			
Mhlangatane	8259	9786	10544			
Nkaba	2455	1818	2329	30590	39364	39597
<u>STEGI DISTRICT:</u>						
Nomahasha +	1090	1447	2184	1090	1447	2184
<u>MEDICAL OUTPOSTS:</u> (visited by Sister-in-charge, Mankaiiana Hospital, but not staffed permanently by a nurse)						
Mgazini	1479	4605	4268			
Endinilembe	570	3593	1918			
Mangqongqo:	152	2102	2618	2291	10300	8804

- + Clinic controlled by Swazi National Treasury, but visited and supervised by Government Medical Officers.
- ++ Mission Clinics visited and supervised by Government Medical Officers.
- +++ Clinics at Missions, rented and run by the Medical Department.

2.

2. HAVELOCK MINE HOSPITAL

The number of Africans who were not mine employees or their dependants who were treated at the Havelock Mine Hospital during 1966 was as follows:

Number of Admissions		262
Number of Outpatients	New Cases	896
	Reattendances	1436
In-patient days		1607
Daily number of In-patients		45

3. MEDICO-LEGAL POSTMORTEM EXAMINATIONS

The number of medico-legal post-mortem examinations carried out at Government and subsidised Mission Hospitals from 1964 to 1966 were as follows:

	1964	1965	1966
Mbabane Hospital	46	51	33
Raleigh Fitkin Memorial Hosp.	106	94	8787
Piggs Peak Hospital	26	31	60
Good Shepherd Hospital	24	35	56
Hlatikulu Hospital	45	50	91

Medico-legal requests from the Police for the examination of Assault and Rape cases totalled 215 at Mbabane Hospital. Figures from other centres are not available at present. 21 examinations were done at Mbabane Hospital in cases of alleged driving under the influence of liquor or drugs.

CHAPTER IV.

MATERNITY AND CHILD WELFARE SERVICES

Ante-Natal Clinics, outside of hospitals, produce the following figures, which are not complete, as not all clinics were notified early in the year to keep records:

Mobile Clinic - Hlatikulu	2028
Mankaiiana	735
Hlatikulu District	5630
Stegi District	699
Manzini District	2069
Piggs Peak District	47

Child Welfare Clinics:

Mbabane District	272
Mankaiiana District	12352
Piggs Peak District	52
Manzini District	2940
Hlatikulu District	16905

The number of ante-natal examinations and confinements for the past 4 years has been as follows:

	<u>Antenatal Examinations:</u>				<u>Confinements:</u>			
	1963	1964	1965	1966	1963	1964	1965	1966
Mbabane Hospital:	2189	2132	3302	3644	691	756	842	1047
Hlatikulu Hospital:	844	843	941	1274	339	355	405	539
Mankaiiana Hospital:	185	331	254	304	135	103	142	147
Piggs Peak Hospital:	1165	779	924	650	280	231	250	286
Ralieggh Fitkin Memorial Hosp:	3720	2083	3264	3181	919	1074	1202	1139
Good Shepherd Hospital:	1251	953	1330	1428	155	226	224	130

CHAPTER V

LABORATORY SERVICES:

The work in the Mbabane Laboratory has shown a 50% increase during the year, but histological examinations and other special investigations are carried out by the South African Institute for Medical Research in Johannesburg.

Small laboratories are situated in the following hospitals - Mbabane, Hlatikulu, and Raleigh Fitkin Memorial, and Good Shepherd are equipped for carrying out simple routine tests.

The W.H.O. TB. Project Laboratory in Manzini now undertakes all examinations for tuberculosis both for hospitals and private practitioners. The Laboratory at the Health Office in Manzini undertakes all examinations for malaria and bilharzia; the results of these examinations are reported under the sections dealing with Malaria and Bilharzia and are not included in the figures which follow:

a) PATHOLOGY LABORATORY MBABANE

Test:	1963	1964	1965	1966
Blood Culture	308	235	469	223
Widal (TMX)	864	517	1036	955
Paul Bunnell Test	13	15	30	6
Vi Test	85	77	152	209
Stool Culture	147	223	253	204
Stool Parasitology	19	28	40	75
Urine complete	31	25	30	39
Urine Chemistry	12	5	7	161
Urine Culture	90	115	635	144
Urine Bilharzia	49	42	52	67
TB. direct	74	51	26	45
TB. culture	30	41	1	-
Blood sugar	54	74	75	86
Blood Urea	94	72	197	157
Serum Protein	42	80	50	24
Serum Bilirubin	23	42	45	73
Blood Cholestrol	8	15	22	18
Blood Amylase	4	8	19	5
Serum Calcium	9	15	30	9
Serum Phosphatase	7	15	31	26
C.S. Fluid	48	66	82	86
Malaria Slides	2	12	2	2
Culture	244	264	294	297
Sensitivity tests	288	392	475	388
Blood Grouping	6	16	14	27
Blood Count	27	60	209	91
E.S.R.	6	25	190	74
Slides for Microscopy	6	12	17	20
Diphtheria	108	38	20	8
Water Analysis	181	147	148	217
Milk Analysis	80	134	128	251
V.D.R.L. Tests	8515	5846	8480	11205
Swabs for E.Coli	-	-	-	187
Hb. Tests	-	-	-	83
TOTAL :	11474	8707	12891	15471

(b) HOSPITAL LABORATORIES

	Mbabane Hospital			Hlatikulu Hospital			Raleigh Fitkin Memorial Hospital			Good Shepherd Hospital		
	1964	1965	1966	1964	1965	1966	1964	1965	1966	1964	1965	1966
Urine Examination (including microscopy):	12332	15464	12972	2173	3323	3627	9509	10019	10366	31	75	
Stool Examinations:	3759	4089	859	876	1121	1341	158	305	285	6	11	
Sputum Examinations:	5345	3265	1741	2590	287	231	720	276	72	12	118	
Other Bacteriological Smears:	558	9417	794	108	82	370	161	160	23	-	-	
Full Blood Counts:	917	1147	3263	49	236	187	789	1104	1571	3	4	
Red Cell Counts:	161	221	177	49	40	326	-	6	9	10	8	
White Cell Counts:	191	191	30	241	437	418	33	40	476	15	10	
E.S.R.	791	717	626	62	24	87	782	1060	765	5	4	
Haemoglobin Examinations:	-	-	-	204	227	-	586	-	2625	-	-	
Blood Films for Parasitology:	-	-	-	71	242	-	-	-	299	-	-	
Other Examinations:	43	18	51	20	4	22	1556	2590	1919	60	282	
	24087	35528	19513	6443	6023	6456	14294	15560	18110	142	512	

CHAPTER VI

FINANCE

The financial statement of the Department for the period 1st April, 1965 to 31st March, 1966 is as follows:-

<u>Revenue</u>	R	R
Hospital, Health Centre and Other fees		<u>36461</u>
<u>Expenditure</u>		
Personal Emoluments	214465	
Travelling Expenses	8750	
Operation and Maintenance of Vehicles	4339	
Other Transport Charges	13185	
Purchase of Replacement Vehicles	3424	
Allowances and Fees - Medical	2857	
Maintenance of Patients	70717	
Maintenance of Mental Patients	7162	
Lighting and Heating	10939	
Hospital Equipment	9724	
Upkeep of Grounds	512	
Temporary Reliefs	4213	
Anti-Malaria Measures	5023	
Bilharzia Control	1008	
Laboratory Services	2161	
Public Health Measures	199	
Grants to Missions	38977	
High Commission Territories Nursing Council	<u>287</u>	397942
<u>C.D. & W. Schemes Expenditure</u>		
D.4835 Planning of Extensions to Mbabane Hospital	22294	
D.4912 Extension Medical Services	208264	
D.4913 Tuberculosis Control Scheme	33103	
D.5136 Extensions to Mbabane Hospital	891	
D.5329 Planning of Mental Hospital	1362	
D.6057 Construction of Clinics	<u>12586</u>	278500
<u>Total Expenditure on Medical and Sanitary Services:</u>		676472
<u>Total Revenue of Territory</u> (Excluding Grant-in-Aid from U.K.)		5796008
<u>The Relationship of Medical Services (Territorial) to Total Revenue of Territory</u>		11.67%

CONCLUSION:

I wish to express my sincere appreciation of the loyal and efficient manner in which members of the Department carried out their duties during the year.

C. RUNCIMAN
DIRECTOR OF MEDICAL SERVICES

APPENDIX I.

MEDICAL DEPARTMENT STAFFING (AS AT 31.12.66)

a) <u>Division I & II</u>	<u>Name</u>	<u>Station</u>
Director of Medical Services	Dr. C. Runciman	Mbabane
Deputy Director of Medical Services	Dr. J.M. Kloppe	Mbabane
Consulting Surgeon (Part-time)	Dr. H.H. Hamlin	
Consulting Ophthalmic Surgeon (Part-time)	Dr. G. Frampton	
Senior Medical Officer	Dr. J. Alexander	Mbabane
Medical Officers of Health	Dr. G.G. Murphy	Mbabane
	Dr. H.C. Armstrong	Manzini
Medical Officers	Dr. F. Friedman	Hlatikulu
	Dr. S.P.N. Shongwe	Mbabane
	Dr. F.J. Copeland	Piggs Peak
	Dr. L. van der Veer	Hlatikulu
	Dr. P.A. Kennedy	Mbabane
	Dr. J.P. O'Conner	Mbabane
	Dr. W.J.L. Downing	Mbabane
	Dr. H.F. Hawthorne	
	Dr. M.S. Compton	Mbabane
	Dr. E.M. Farrell	Goedgegun
Locum:	Dr. E. Mofekeng	Hlatikulu
Senior Executive Officer	Mr. R.F. Phillips	Mbabane
Hospital Secretary	Mr. L. Smit	Mbabane
Pharmacist-Storekeeper	Mr. G.R. Gibbon	Mbabane
	Mr. J.L. van der Vyver	Hlatikulu
Laboratory Technician	Mrs. M.E. Gibbon	Mbabane
Smear Examiner	Mr. P.M. Matthews	Manzini
Senior Health Inspector	Mr. D.M. Eckard	Manzini
Health Inspectors	Mr. L. Mtetwa	Mbabane
	Mr. C.D. Nxumalo	Manzini
	Mr. L.M. Mbabama	Goedgegun.
	Mr. Z. Zandemela	Mbabane
Matrons	Mrs. A.C.I Mabuza	Mbabane
	Miss D.E. Burns	Hlatikulu
Nursing Sisters	Mrs. P.I. Mdiniso	
	Mrs. S.B. Dowling	
	Mrs. N.W. Mabuza	
	Mrs. N.N. Dludlu	
	Mrs. M.J. Masipa	
	Mrs. D.M. Bengu	
	Mrs. G.T. Abrahams	
	Mrs. E. Mtetwa	
	Mrs. E. Mpongose	
	Mrs. A. Dlamini	
	Mrs. F. Dlamini	
	Mrs. I. Masuku	
	Mrs. A. Khanyile	
	Mrs. J. Mtetwa	
	Mrs. E. Mtetwa	
	S. Khoza	
	J. Khumalo	
	A. Mahluza	
	E. Nxumalo	
	J. Zwane	
	I.J. Shilubane	
	E. Simelane	

Division I & II cont.

Radiographer	Mrs. V. Elyan
Medical Assistant	Mr. A.F.K. Phiri
Health Educator	Mr. R.L. Phillips
Accountant	Mr. J.C. Mapumulo
Personal Assistant	Mrs. I. Lewis
Stenographer	Miss S. McCabe
Handyman	Mr. W.Q. Mordaunt
Housekeeper	Mrs. E.I. Dlamini
	Mrs. Morake

b) Division III

6 Dispensers
4 Pupil Dispensers
5 Laboratory Assistants
2 Xray Assistants
10 Clerks
106 Nurses
4 Out-Patient Attendants
15 Driver/Handyman
1 Senior Malaria Assistant
10 Malaria Assistants
1 Vaccinator
3 Senior Ward Orderlies
6 Dispensary Orderlies
53 Ward Orderlies
33 Nurse Aides
3 Wardmaids
20 Laundresses
3 Seamstresses
2 Office Messengers
6 Night Watchmen
5 Groundsmen
14 Cooks
2 Telephonists
7 Housemaids
1 Senior Mental Patient Attendant
1 Copy Typist
6 Mental Patient Attendants
13 Health Visitors

APPENDIX: II

RETURN OF CASES TREATED: GOVERNMENT AND MISSION HOSPITALS 1966.

Detailed List No:	Group Causes:	Total Cases:	Out-patients:	In-patients:	Deaths
001-008	Tuberculosis, Respiratory System	1010	374	546	90
010	Tuberculosis of Meninges or C.N.S.	5	1	3	1
011	Tuberculosis of Intestines and Peritoneum	50	20	29	1
012-013	Tuberculosis of Bones and Joints	68	34	33	1
014-019	Tuberculosis - All other forms	136	86	50	-
020	Congenital Syphilis	111	98	11	2
021	Early Syphilis	608	588	20	-
024	Tabes Dorsalis	2	1	1	-
022-023)					
026-029)	All other Syphilis	806	760	46	-
030-035	Gonoccal Infection	2089	2055	34	-
036-039	Other Venereal Diseases	155	66	86	3
040-041	Enteric Fever	144	16	118	10
044	Brucellosis	15	15	-	-
045	Bacillary Dysentery	496	376	119	1
046	Amoebiasis	403	229	168	6
052	Erysipelas	197	190	7	-
055	Diphtheria	39	8	30	1
056	Whooping Cough	766	597	168	1
057	Meningococcal Infections	9	1	7	1
060	Leprosy	11	4	6	1
061	Tetanus	60	29	24	7
080-083	Late Effects of Poliomyelitis	26	14	12	-
084	Smallpox (Variola Minor)	73	15	55	3
085	Measles	902	713	181	8
092	Infectious Hepatitis	295	232	62	1
104	Tick-bite Fever	45	39	6	-
116	Malaria	14	-	13	1
123-1	Bilharzia (Vesical)	751	623	127	1
123-0	Bilharzia (Intestinal)	119	89	29	1
126	Tape Worm	657	649	8	-
130-0	Ascariasis	882	875	7	-
124,128)					
130-1)	Other Helminthic Diseases	364	353	11	-
049	Poisoning - Food	70	47	22	1
087	Chicken Pox	211	189	22	-
131	Dermatophytosis	1225	1211	14	-
135	Scabies	1881	1806	75	-
137,138	Other Infective and Parasitic Diseases	214	158	56	-
140-150	Malignant Neoplasms of				
	(a) Mouth, Pharynx & Oesophagus	23	10	12	1
151-154	(b) Stomach, Intestine, Rectum	4	3	1	-
161-163	(c) Larynx, Trachea, Lung	6	-	6	-
170	(d) Breast	6	4	2	-
171	(e) Cervix Uteri	24	-	21	3
172	(f) Body of Uterus	1	-	1	-
177	(g) Prostate	7	-	5	2
191-9	(h) Skin	-	-	-	-
196-7	(i) Bone & Connective Tissue	9	1	8	-
199	(j) All Other Sites	28	2	22	4

/Leukaemia ..

Detailed List No:	Group Causes	Total Cases:	Out- pat- ients:	In- pat- ients:	Deaths
204	Leukaemia	5	-	2	3
210-239	Benign Neoplasms	338	239	99	-
250-251	Non-Toxic Goitre	136	115	21	-
252	Thyrotoxicosis	17	10	7	-
260	Diabetes Mellitus	181	134	45	2
281	Pellagra	893	852	35	6
282	Scurvy	17	9	7	1
286-6	Kwashiorkor	799	418	341	40
286-5	Malnutrition unqualified	1711	1465	218	28
290	Hyperchromic Anaemias	1	-	1	-
291	Hypochromic Aneamias	222	215	7	-
292,293	Anaemia, unspecified	298	268	27	3
241	Asthma	534	428	104	1
240,242)					
245)	Other Allergic Disorders	519	494	25	-
300-309	Psychoses	43	32	11	-
310,324)					
326)	Psychoneuroses and Hysteria	164	111	53	-
325	Mental Deficiency	91	65	34	2
330-334	Vascular Lesions of C.N.S.	59	19	37	3
340	Meningitis (Non-Meningo-coccal)	76	26	45	5
353	Epilepsy	208	118	87	3
370-379	Inflammatory Diseases of Eye	1348	1223	125	-
385	Cataract	112	75	27	-
387	Glaucoma	28	12	16	-
390	Otitis Externa	479	467	12	-
391-393	Otitis Media & Mastoiditis	930	859	71	-
380-384	All other Diseases of Eye	561	504	57	
341-344	All Other Diseases of C.N.S. & Sense Organs	262	155	101	6
400-402	Rheumatic Fever	149	119	30	-
410-416	Chronic Rheumatic Heart Disease	160	126	34	-
420-422	Arterio-Sclerotic & Degenerative Heart Disease	296	167	123	46
430-434	Other Diseases of Heart	460	321	121	18
440-443	Hypertension & Heart Disease	152	123	29	-
444-447	Hypertension	302	229	70	3
450-456	Diseases of Arteries	44	33	10	1
460-468	Other Diseases of Circulatory System	343	216	115	12
470-475	Acute Upper Respiratory Tract Infections including Acute Tonsillitis	5144	4764	380	-
480-483	Influenza	1085	977	108	-
490	Lobar Pneumonia	402	210	182	10
491	Broncho-Pneumonia	1222	837	358	27
492,493	Atypical Pneumonia	122	55	62	5
500	Acute Bronchitis	1889	1735	153	1
501,502	Bronchitis, Chronic & Unspecified	1557	1393	163	1
512	Chronic Pharyngitis & Chronic Tonsillitis	390	354	35	1
518,521	Empyema & Lung Abscess	29	11	17	1
519	Pleurisy	204	130	71	3
523	Pneumoconiosis	47	41	6	-
520-522	Other Respiratory Diseases	411	379	29	3
530	Dental Caries	4287	4238	49	-
531-535	All Other Diseases of Teeth & Gums	499	459	40	-

Gastric/.....

Detailed List No:	Group Causes:	Total Cases:	Out Pat- ients:	In Pat- ients:	Deaths:
540	Gastric Ulcer	116	83	32	1
541	Duodenal Ulcer	96	89	7	-
543	Gastritis & Duodenitis	691	562	126	3
550-553	Appendicitis	133	51	82	-
570	Intestinal Obstruction	63	7	44	12
560	Hernia	129	77	51	1
570-0	Gastro-enteritis (4 weeks to 2 years)	3312	2770	478	64
570-1	Gastro-enteritis (over 2 years)	2926	2355	522	49
572	Chronic Enteritis and Colitis	612	581	31	-
581	Cirrhosis of Liver	156	70	77	9
584, 585	Cholecystitis	101	57	43	1
536-539) 544, 573) 580, 582) 583, 586) 587	Other diseases of Digestive System	2865	2641	217	7
590	Acute Nephritis	67	31	34	2
591-594	Chronic Nephritis	63	23	35	5
600	Infections of Kidney	276	228	46	2
602, 604	Calculi of Urinary System	17	9	8	-
610	Hyperplasia of Prostate	46	24	21	1
620, 621	Diseases of Breast	159	120	39	-
613	Hydrocele	117	63	54	-
634	Disorders of Menstruation	1710	1523	187	-
601, 603) 605, 609) 611, 612) 614-617) 622-633) 635-637)	All other Diseases of Genito-Urinary System	5432	4509	914	9
660	Normal Deliveries	2739	-	2739	-
671) 673-678)	Deliveries with Complications	552	-	541	11
640, 641) 681, 682) 684	Sepsis of Pregnancy Childbirth & Puerperium	68	44	21	3
642	Toxaemia of Pregnancy	45	12	32	1
643, 644) 670, 672)	Haemorrhage of Pregnancy and Childbirth	33	8	25	-
650	Abortion	695	213	481	1
651	Abortion with Sepsis	51	13	37	1
690-) 698)	Infections of Skin and Subcutaneous Tissues	3961	3391	569	1
720-727	Arthritis and Spondylitis	344	272	72	-
726, 727	Muscular Rheumatism & Rheumatism Unqualified	986	918	68	-
730	Osteomyelitis and Peri-Ostitis	150	76	73	1
737, 745) 749	Ankylosis and Acquired Musculo-Skeletal Deformity	162	138	24	-
700-714	All other Diseases of Skin	515	448	67	-
731-736	All other Diseases of Musculo-Skeletal System	305	289	16	-
750-759	Congenital Malformations	94	40	47	7
760-762	Birth Injuries	19	8	7	4
765	Ophthalmia Neonatorum	30	16	14	-
770	Haemolytic Disease (Neo-Natal)	15	3	7	5
773-776	Other Diseases Early Infancy	341	152	134	55

Detailed List No:	Group Causes.	Total Cases:	Out- pat- ients	In- pat- ients:	Deaths
791	Senility	68	55	9	4
788-9	P.U.O.	457	361	85	11
788-1-)					
788-7)	All Other Ill-defined				
788-9)	Causes of Morbidity	626	535	89	2
789-792)					
795)					
793	Observation without need for further care	584	-	584	-

"E" CODE ALTERNATIVE CLASSIFICATION OF ACCIDENTS, POISONING AND VIOLENCE (EXTERNAL CAUSE).

E810-E835	Motor Vehicle Accidents	448	203	238	7
E800-E802	Other Transport Accidents	162	88	71	3
E870-E895	Accidental Poisoning	178	46	128	4
E900-E904	Accidental Falls.	1488	987	497	4
E612	Accidents caused by Machinery	160	119	40	1
E916	Accidents caused by Fire	250	143	101	6
E917,E918	Accidents caused by Hot substances and corrosives	331	238	93	-
E919	Accidents caused by Firearms	9	6	3	-
E910-E913-)	All other accidental				
E915,E920-)	causes	3071	2276	796	4
E928,E930-)					
E965)					
E970-E979	Suicide & Self-Inflicted Injury	19	7	12	-
E980-E985	Assault, Homocide	1798	762	997	39

"N" CODE ALTERNATIVE CLASSIFICATION OF ACCIDENTS, POISONINGS AND VIOLENCE (NATURE OF INJURY)

N800-N804	Fracture of Skull	194	14	161	19
N805-N809	Fracture of Spine & Trunk	125	59	66	-
N810-N829	Fracture of Limbs	963	410	550	3
N830-N839	Dislocation	120	68	52	-
N840-N848	Sprains and Strains	819	730	89	-
N850-N856	Head Injury (Excluding Fracture)	363	125	224	14
N860-N869	Internal Injury, chest abdomen and pelvis	154	36	103	15
N870-N908	Laceration & Open Wounds	2681	1704	971	6
N910-N929	Superficial Injury - contusion	969	725	244	-
N930-N936	Foreign Body entering through Orifice	195	135	60	-
N940-N949	Burns	528	341	179	8
N960-N979	Effects of Poison	198	47	148	3
N950-N959)	All other effects of				
N980-N999	External Causes	499	450	49	-

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Detailed List No.	Group Causes:	Total Cases:	Out- Pat- ients:	In- Pat- ients:	Deaths:
Y00	Medical Examinations, Boards and Tax Exemption Examinations	5383	5383	-	-
Y02	Prophylactic Injections:				
	a) Smallpox Vaccination	3094	3094	-	-
	b) T.A.B.	53	53	-	-
	c) Diphtheria	6	6	-	-
	d) Diphtheria and Whooping Cough	-	-	-	-
	e) Diphtheria, Whooping Cough & Tetanus	890	890	-	-
	f) Tetanus	3	3	-	-
	g) Poliomyelitis	644	644	-	-
	h) Yellow Fever	194	194	-	-
	i) Cholera	6	6	-	-
Y06	Ante-Natal Examinations	4510	4510	-	-
Y08	Attendants admitted as In-patients with sick children	1109	-	1109	-
TOTAL "NEW" PATIENTS		99416			

SUBSEQUENT ATTENDANCES:

Subsequent Ante-Natal Attendances	6062
Subsequent Prophylactic Injections	2205
All Other Subsequent Attendances	55825
GRAND TOTAL SUBSEQUENT ATTENDANCES	64092

